<110>   Novozymes Biopharma UK Limited
         Sleep, Darrell

<120>   Gene and Polypeptide Sequences

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<140>   10/522,074
<141>   2005-07-08

<150>   GB 0217033.0
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cgctcaatac ttgcaacaat gtccattcga agatcacgtc aagttggtca acgaagttac   240
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cccagtctct gatagagtca ccaagtgttg tactgaatct ttggttaaca gaagaccatg   1560
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ccattcgaag atcacgtcaa gttggtcaac gaagttaccg aattcgctaa gacttgtgtt     180
gctgacgaat ctgctgaaaa ctgtgacaag tccttgcaca ccttgttcgg tgataagttg     240
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gctgcttgtt tgttgccaaa gttggatgaa ttgagagacg aaggtaaggc ttcttccgct     600
aagcaaagat tgaagtgtgc ttccttgcaa aagttcggtg aaagagcttt caaggcttgg     660
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cacaagccaa aggctactaa ggaacaattg aaggctgtca tggatgattt cgctgctttc    1680
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gaagatcacg tcaagttggt caacgaagtt accgaattcg ctaagacttg tgttgctgac        240
gaatctgctg aaaactgtga caagtccttg cacaccttgt tcggtgataa gttgtgtact        300
gttgctacct tgagagaaac ctacggtgaa atggctgact gttgtgctaa gcaagaacca        360
gaaagaaacg aatgtttctt gcaacacaag gacgacaacc caaacttgcc aagattggtt        420
agaccagaag ttgacgtcat gtgtactgct ttccacgaca acgaagaaac cttcttgaag        480
aagtacttgt acgaaattgc tagaagacac ccatacttct acgctccaga attgttgttc        540
ttcgctaaga gatacaaggc tgctttcacc gaatgttgtc aagctgctga taaggctgct        600
tgtttgttgc caaagttgga tgaattgaga gacgaaggta aggcttcttc cgctaagcaa        660
agattgaagt gtgcttcctt gcaaaagttc ggtgaaagag ctttcaaggc ttgggctgtc        720
gctagattgt ctcaaagatt cccaaaggct gaattcgctg aagtttctaa gttggttact        780
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gaaatgccag ctgacttgcc atctttggct gctgacttcg ttgaatctaa ggacgtttgt       1020
aagaactacg ctgaagctaa ggacgtcttc ttgggtatgt tcttgtacga atacgctaga       1080
agacacccag actactccgt tgtcttgttg ttgagattgg ctaagaccta cgaaactacc       1140
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ccaaaggcta ctaaggaaca attgaaggct gtcatggatg atttcgctgc tttcgttgaa       1740
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gaagatcatg taaaattagt gaatgaagta actgaatttg caaaaacatg tgttgctgat        240
gagtcagctg aaaattgtga caaatcactt catccctttt tggagacaa attatgcaca        300
gttgcaactc ttcgtgaaac ctatggtgaa atggctgact gctgtgcaaa acaagaacct        360
gagagaaatg aatgcttctt gcaacacaaa gatgacaacc caaacctccc ccgattggtg        420
agaccagagg ttgatgtgat gtgcactgct tttcatgaca atgaagagac attttttgaaa        480
aaatacttat atgaaattgc cagaagacat ccttacttt atgccccgga actccttttc        540
tttgctaaaa ggtataaagc tgcttttaca gaatgttgcc aagctgctga taaagctgcc        600
tgcctgttgc caaagctcga tgaacttcgg gatgaaggga aggcttcgtc tgccaaacag        660
agactcaagt gtgccagtct ccaaaaattt ggagaaagag ctttcaaagc atgggcagta        720
gctcgcctga ccagagatt tcccaaagct gagtttgcag aagtttccaa gttagtgaca        780
gatcttacca aagtccacac ggaatgctgc catggagatc tgcttgaatg tgctgatgac        840
agggcggacc ttgccaagta tatctgtgaa aatcaagatt cgatctccag taaactgaag        900
gaatgctgtg aaaaacctct gttggaaaaa tcccactgca ttgccgaagt ggaaaatgat        960
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gagatgcctg ctgacttgcc ttcattagct gctgattttg ttgaaagtaa ggatgtttgc        1020
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aggcatcctg attactctgt cgtgctgctg ctgagacttg ccaagacata tgaaaccact        1140
ctagagaagt gctgtgccgc tgcagatcct catgaatgct atgccaaagt gttcgatgaa        1200
tttaaacctc ttgtggaaga gcctcagaat ttaatcaaac aaaattgtga gcttttttgag       1260
cagcttggag agtacaaatt ccagaatgcg ctattagttc gttacaccaa gaaagtaccc        1320
caagtgtcaa ctccaactct tgtagaggtc tcaagaaacc taggaaaagt gggcagcaaa        1380
tgttgtaaac atcctgaagc aaaaagaatg ccctgtgcag aagactatct atccgtggtc        1440
ctgaaccagt tatgtgtgtt gcatgagaaa acgccagtaa gtgacagagt caccaaatgc        1500
tgcacagaat ccttggtgaa caggcgacca tgcttttcag ctctggaagt cgatgaaaca        1560
tacgttccca aagagtttaa tgctgaaaca ttcaccttcc atgcagatat atgcacactt        1620
tctgagaagg agagacaaat caagaaacaa actgcacttg ttgagctcgt gaaacacaag        1680
cccaaggcaa caaaagagca actgaaagct gttatggatg atttcgcagc ttttgtagag        1740
aagtgctgca aggctgacga taaggagacc tgctttgccg aggagggtaa aaaacttgtt        1800
gctgcaagtc aagctgcctt aggctta                                           1827


<210>  23
<211>  47
<212>  DNA
<213>  Artificial Sequence


<220>
<223>  Synthetic oligonucleotide leader sequence


<400>  23
ctaaagagaa aaagaatgga gacgatgaat acccacttca tctttgc                       47


<210>  24
<211>  72
<212>  DNA
<213>  Artificial Sequence


<220>
<223>  Synthetic oligonucleotide leader sequence


<400>  24
atgaagtggg tattcatcgt ctccattctt tttctcttta gctcggctta ttccaggagc        60
ttggataaaa ga                                                             72


<210>  25
<211>  1827
<212>  DNA
<213>  Artificial Sequence


<220>
<223>  Synthetic oligonucleotide leader sequence and mature human
       albumin coding region


<400>  25
atgaagtggg tattcatcgt ctccattctt tttctcttta gctcggctta ttccaggagc        60
ttggataaaa gagatgcaca caagagtgag gttgctcatc ggtttaaaga tttgggagaa        120
gaaaatttca aagccttggt gttgattgcc tttgctcagt atcttcagca gtgtccattt        180
gaagatcatg taaaattagt gaatgaagta actgaatttg caaaaacatg tgttgctgat        240
gagtcagctg aaaattgtga caaatcactt catccctttt tggagacaaa attatgcaca        300
gttgcaactc ttcgtgaaac ctatggtgaa atggctgact gctgtgcaaa acaagaacct        360
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gagagaaatg aatgcttctt gcaacacaaa gatgacaacc caaacctccc ccgattggtg        420
agaccagagg ttgatgtgat gtgcactgct tttcatgaca atgaagagac attttttgaaa       480
aaatacttat atgaaattgc cagaagacat ccttactttt atgccccgga actcctttttc      540
tttgctaaaa ggtataaagc tgcttttaca gaatgttgcc aagctgctga taaagctgcc        600
tgcctgttgc caaagctcga tgaacttcgg gatgaaggga aggcttcgtc tgccaaacag        660
agactcaagt gtgccagtct ccaaaaattt ggagaaagag ctttcaaagc atgggcagta        720
gctcgcctga gccagagatt tcccaaagct gagtttgcag aagtttccaa gttagtgaca        780
gatcttacca aagtccacac ggaatgctgc catggagatc tgcttgaatg tgctgatgac        840
agggcggacc ttgccaagta tatctgtgaa aatcaagatt cgatctccag taaactgaag        900
gaatgctgtg aaaaacctct gttggaaaaa tcccactgca ttgccgaagt ggaaaatgat        960
gagatgcctg ctgacttgcc ttcattagct gctgattttg ttgaaagtaa ggatgtttgc       1020
aaaaactatg ctgaggcaaa ggatgtcttc ctgggcatgt ttttgtatga atatgcaaga       1080
aggcatcctg attactctgt cgtgctgctg ctgagacttg ccaagacata tgaaaccact       1140
ctagagaagt gctgtgccgc tgcagatcct catgaatgct atgccaaagt gttcgatgaa       1200
tttaaacctc ttgtggaaga gcctcagaat ttaatcaaac aaaaattgtga gctttttgag      1260
cagcttggag agtacaaatt ccagaatgcg ctattagttc gttacaccaa gaaagtaccc       1320
caagtgtcaa ctccaactct tgtagaggtc tcaagaaacc taggaaaagt gggcagcaaa        1380
tgttgtaaac atcctgaagc aaaaagaatg ccctgtgcag aagactatct atccgtggtc        1440
ctgaaccagt tatgtgtgtt gcatgagaaa acgccagtaa gtgacagagt caccaaatgc        1500
tgcacagaat ccttggtgaa caggcgacca tgcttttcag ctctggaagt cgatgaaaca        1560
tacgttccca aagagtttaa tgctgaaaca ttcaccttcc atgcagatat atgcacactt        1620
tctgagaagg agagacaaat caagaaacaa actgcacttg ttgagctcgt gaaacacaag        1680
cccaaggcaa caaaagagca actgaaagct gttatggatg atttcgcagc ttttgtagag        1740
aagtgctgca aggctgacga taaggagacc tgctttgccg aggagggtaa aaaacttgtt       1800
gctgcaagtc aagctgcctt aggctta                                           1827


<210>    26
<211>    1827
<212>    DNA
<213>    Artificial Sequence

<220>
<223>    Synthetic oligonucleotide plasmid sequence

<400>    26
atgaagtggg tttctttcat ttccttgttg ttcttgttct cctctgctta ctctagatct         60
ttggataaga gagacgctca caagtccgaa gtcgctcaca gattcaagga cttgggtgaa        120
gaaaacttca aggctttggt cttgatcgct ttcgctcaat acttgcaaca atgtccattc        180
gaagatcacg tcaagttggt caacgaagtt accgaattcg ctaagacttg tgttgctgac        240
gaatctgctg aaaactgtga caagtccttg cacaccttgt tcggtgataa gttgtgtact        300
gttgctacct tgagagaaac ctacggtgaa atggctgact gttgtgctaa gcaagaacca        360
gaaagaaacg aatgtttctt gcaacacaag gacgacaacc caaacttgcc aagattggtt        420
agaccagaag ttgacgtcat gtgtactgct ttccacgaca cgaagaaac cttcttgaag       480
aagtacttgt acgaaattgc tagaagacac ccatacttct acgctccaga attgttgttc        540
ttcgctaaga gatacaaggc tgctttcacc gaatgttgtc aagctgctga taggctgct        600
tgtttgttgc caaagttgga tgaattgaga gacgaaggta aggcttcttc cgctaagcaa        660
agattgaagt gtgcttcctt gcaaaagttc ggtgaaagag ctttcaaggc ttgggctgtc        720
gctagattgt ctcaaagatt cccaaaggct gaattcgctg aagtttctaa gttggttact        780
gacttgacta aggttcacac tgaatgttgt cacggtgact gttggaatg tgctgatgac        840
agagctgact ggctaagta catctgtgaa aaccaagact ctatctcttc caagttgaag        900
gaatgttgtg aaaagccatt gttggaaaag tctcactgta ttgctgaagt tgaaaacgat        960
gaaatgccag ctgacttgcc atctttggct gctgacttcg ttgaatctaa ggacgtttgt       1020
aagaactacg ctgaagctaa ggacgtcttc ttgggtatgt tcttgtacga atacgctaga       1080
agacacccag actactccgt tgtcttgttg ttgagattgg ctaagaccta cgaaactacc       1140
ttggaaaagt gttgtgctgc tgctgaccca cacgaatgtt acgctaaggt tttcgatgaa       1200
ttcaagccat tggtcgaaga accacaaaac ttgatcaagc aaaactgtga attgttcgaa       1260
caattgggtg aatacaagtt ccaaaacgct ttgttggtta gatacactaa gaaggtccca       1320
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caagtctcca ccccaacttt ggttgaagtc tctagaaact tgggtaaggt cggttctaag      1380
tgttgtaagc acccagaagc taagagaatg ccatgtgctg aagattactt gtccgtcgtt      1440
ttgaaccaat tgtgtgtttt gcacgaaaag accccagtct ctgatagagt caccaagtgt      1500
tgtactgaat ctttggttaa cagaagacca tgtttctctg ctttggaagt cgacgaaact      1560
tacgttccaa aggaattcaa cgctgaaact ttcaccttcc acgctgatat ctgtaccttg      1620
tccgaaaagg aaagacaaat taagaagcaa actgctttgg ttgaattggt caagcacaag      1680
ccaaaggcta ctaaggaaca attgaaggct gtcatggatg atttcgctgc tttcgttgaa      1740
aagtgttgta aggctgatga taaggaaact tgtttcgctg aagaaggtaa gaagttggtc      1800
gctgcttccc aagctgcttt gggtttg                                          1827
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<210> 27
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide leader sequence

<400> 27
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atgaagtggg ttttcatcgt ctccattttg ttcttgttct cctctgctta ctctagatct      60
ttggataaga ga                                                          72
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<210> 28
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide secretion pre-sequence

<400> 28

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Met Lys Trp Val Phe Ile Val Ser Ile Leu Phe Leu Phe Ser Ser Ala
1               5                   10                  15
Tyr Ser
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<210> 29
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide leader sequence

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> CAN BE EITHER Ile OR Val OR Ala OR Met

<400> 29

Xaa Xaa Xaa Thr Xaa
1   5

<210> 30
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide secretion pre-sequence

<400> 30

Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Gly Val Phe Arg Arg
1   5   10   15

<210> 31
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide secretion pre-sequence

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> any amino acid PREFERABLY Phe

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> any amino acid PREFERABLY Ile

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> any amino acid PREFERABLY Val

<220>
<221> MISC_FEATURE
<222> (8)..(8)

<223> any amino acid PREFERABLY Ser OR Thr

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> any amino acid PREFERABLY Ile

<400> 31

Met Lys Trp Val Xaa Xaa Xaa Xaa Xaa Leu Phe Leu Phe Ser Ser Ala
1   5   10   15
Tyr Ser Arg Gly Val Phe Arg Arg
            20

<210> 32
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide secretion pre-pro sequence

<400> 32

Met Lys Trp Val Phe Ile Val Ser Ile Leu Phe Leu Phe Ser Ser Ala
1   5   10   15
Tyr Ser Arg Ser Leu Asp Lys Arg
            20

<210> 33
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic polypeptide secretion pre-sequence

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> CAN BE EITHER Lys OR Arg OR His

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<400> 33

Met Xaa Xaa Xaa

<210> 34
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide leader sequence

<400> 34
ttcatcgtct ccatt   15

<210> 35
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide primer

<400> 35
gcatgcggcc gcccgtaatg cggtatcgtg aaagcg   36

<210> 36
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide primer

<400> 36
gcataagctt acccacttca tctttgcttg tttag   35

<210> 37
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide linker

<400> 37
ttaggcttat a   11

<210> 38
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide linker

<400> 38
ccgaatattc ga   12

<210> 39
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide primer

<400> 39
gttagaatta ggttaagctt gttttttat tggcgatgaa   40

<210> 40
<211> 1865
<212> DNA
<213> Artificial Sequence

<220>
<223> s. cerevisiae 5'UTR and synthetic oligonucleotide leader sequence
     and mature human albumin CDS

<400> 40
aagcttaacc taattctaac aagcaaagat gaagtgggtt tctttcattt ccttgttgtt   60
cttgttctcc tctgcttact ctagatcttt ggataagaga gacgctcaca agtccgaagt   120
cgctcacaga ttcaaggact tgggtgaaga aaacttcaag gctttggtct tgatcgcttt   180
cgctcaatac ttgcaacaat gtccattcga agatcacgtc aagttggtca cgaagttac   240
cgaattcgct aagacttgtg ttgctgacga atctgctgaa aactgtgaca agtccttgca   300
caccttgttc ggtgataagt tgtgtactgt tgctaccttg agagaaacct acggtgaaat   360
ggctgactgt tgtgctaagc aagaaccaga aagaaacgaa tgtttcttgc aacacaagga   420
cgacaaccca aacttgccaa gattggttag accagaagtt gacgtcatgt gtactgcttt   480
ccacgacaac gaagaaacct tcttgaagaa gtacttgtac gaaattgcta gaagacaccc   540
atacttctac gctccagaat gttgttctt cgctaagaga tacaaggctg ctttcaccga   600
atgttgtcaa gctgctgata aggctgcttg tttgttgcca aagttggatg aattgagaga   660
cgaaggtaag gcttcttccg ctaagcaaag attgaagtgt gcttccttgc aaaagttcgg   720
tgaaagagct ttcaaggctt gggctgtcgc tagattgtct caaagattcc caaaggctga   780
attcgctgaa gtttctaagt tggttactga cttgactaag gttcacactg aatgttgtca   840
cggtgacttg ttggaatgtg ctgatgacag agctgacttg gctaagtaca tctgtgaaaa   900
ccaagactct atctcttcca gttgaagga atgttgtgaa aagccattgt tggaaaagtc   960
tcactgtatt gctgaagttg aaaacgatga aatgccagct gacttgccat ctttggctgc   1020

tgacttcgtt gaatctaagg acgtttgtaa gaactacgct gaagctaagg acgtcttctt   1080
gggtatgttc ttgtacgaat acgctagaag acacccagac tactccgttg tcttgttgtt   1140
gagattggct aagacctacg aaactacctt ggaaaagtgt tgtgctgctg ctgacccaca   1200
cgaatgttac gctaaggttt cgatgaatt caagccattg gtcgaagaac acaaaacctt   1260
gatcaagcaa actgtgaat tgttcgaaca attgggtgaa tacaagttcc aaaacgcttt   1320
gttggttaga tacactaaga aggtcccaca agtctccacc ccaactttgg ttgaagtctc   1380
tagaaacttg ggtaaggtcg gttctaagtg ttgtaagcac ccagaagcta agagaatgcc   1440
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cccagtctct gatagagtca ccaagtgttg tactgaatct ttggttaaca gaagaccatg   1560
tttctctgct ttggaagtcg acgaaactta cgttccaaag gaattcaacg ctgaaacttt   1620
caccttccac gctgatatct gtaccttgtc cgaaaaggaa agacaaatta gaagcaaac   1680
tgctttggtt gaattggtca agcacaagcc aaaggctact aaggaacaat gaaggctgt   1740
catggatgat ttcgctgctt tcgttgaaaa gtgttgtaag gctgatgata aggaaacttg   1800

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tttcgctgaa gaaggtaaga agttggtcgc tgcttcccaa gctgctttgg gtttgtaata      1860
agctt                                                                  1865
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